

CLAIMS:

1. Process for the evaluation of a received signal of an SAR/MTI pulsed radar system emitting transmitted SAR and MTI pulses with a respective definable pulse repetition frequency (PRF_SAR, PRF_MTI), the received signal being a superimposition consisting of echo pulse sequences of SAR echo pulse signals and MTI echo pulse signals, characterized in that, in the received echo pulse sequence of the received signal, each pulse corresponding, to an integral multiple of an integral ratio of the pulse repetition frequency PRF_MTI of the transmitted MTI signal to the pulse repetition frequency PRF_SAR of the transmitted SAR signal and received after a transmitted SAR pulse, is evaluated in an SAR process, and the remaining pulses of the received echo pulse sequence of the received signal are evaluated in an MTI process, in which case the pulse for the MTI signal processing absent as a result of the SAR signal processing is reproduced by means of interpolation methods.

2. Process according to Claim 1, characterized in that the ratio of the pulse repetition frequency PRF_MTI of the transmitted MTI signal to the pulse repetition frequency PRF_SAR of the transmitted SAR signal amounts to at least 5.

3. Process according to Claim 1,

characterized in that the ratio of the pulse repetition frequency PRF_MTI of the transmitted MTI signal to the pulse repetition frequency PRF_SAR of the transmitted SAR signal is changed from one MTI burst to the next MTI burst.

4. Process according to one of the preceding claims, characterized in that the pulse repetition frequency PRF_SAR of the transmitted SAR signal amounts to between 200 Hz and 400 Hz.

5. Process according to one of the preceding claims, characterized in that the pulse repetition frequency PRF_MTI of the transmitted MTI signal amounts to between 2 kHz and 4 kHz.

6. Antenna having a plurality of transmitting and receiving modules (3) for implementing a process according to one of the preceding claims, characterized in that the transmitting and receiving modules (3) are combined to a definable number of subgroups (3a).

7. Antenna according to Claim 6, characterized in that a definable number of transmitting and receiving modules (3) are applied to a common delay link (4).

8. Antenna according to Claim 7, characterized in that a definable number of delay links (4)

are combined and applied to a digital receiving unit (5), particularly an analog-to-digital converter.

9. Antenna according to Claim 8,
characterized in that the digital receiving units (5) are connected with devices (6) for the digital beam shaping and for the moving target indication according to the STAP process.

10. Antenna according to Claim 9,
characterized in that the devices (6) for the digital beam shaping and moving target indication are connected with additional devices (6a) for the SAR and MTI signal evaluation.

11. Antenna according to Claim 7,
characterized in that a definable number of delay links (4) are combined to an analog network (7) with a definable number of outputs (8) which are each applied to a digital receiving unit (5), particularly an analog-to-digital converter, the digital receiving units (5) each being applied by means of devices (9) for the SAR and MTI signal evaluation.